

representatives in Great Britain, and the undersigned have carefully reviewed the Final Office Action of February 7, 2003, together with the prior art cited and relied on by the Examiner. In response, the specification of the application, and various ones of the claims have been amended. It is believed that this Amendment After Final Rejection is an earnest effort to place the application in condition for allowance without raising any new issues and without requiring additional searching. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

In the Final Office Action, the Amendment of November 22, 2002 was objected to as adding new matter. It was asserted that the addition of the term "pre-formed" to the specification, at pages 5 and 13 thereof constituted new matter. As discussed with the Examiner during the interview, the two amended paragraphs of the specification have been amended a second time to remove the previously inserted phrase "pre-formed." These changes are believed to overcome the objection to the Amendment of November 22, 2002 with respect to the specification.

Claims 19-38 and 40-43 were rejected under 35 U.S.C. 112, first paragraph as containing subject matter not properly described in the specification. Claims 19, 20, 24-28, 32, 38 and 40-43 were previously amended to include the term "pre-formed." As was also discussed with the Examiner, this phrase has now been removed from the claims which remain pending in the application. It is believed that the claims now pending comply with 35 U.S.C 112, first paragraph.

Claims 19-27, 29-38 and 40-43 were finally rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 405 929 to Haws. As discussed with Examiner Halpern during the interview of April 17, 2003 and for the reasons set forth below, it is believed that the claims now pending in this application are patentable over Haws.

The purpose of the subject invention, and the purpose of the Haws device are both to add a material to a tobacco rod during the making of the rod. The methods used to accomplish that result vary substantially manner between the Haws device and the present invention.

In Haws, as seen in Figs. 1 and 2, a liquid is stored in a tank 50. That liquid is pumped through a pipe 51 to a nozzle 58 where it is placed, as a liquid strand, in the tobacco which is being accumulated on a vacuum belt 12. As seen in Fig. 4, the pipe 51 enters into the tobacco accumulating area at a direction which is 90° to the direction of travel of the vacuum belt 12. The pipe 51 then turns so that it is parallel with the direction of travel of the vacuum belt 12. The nozzle 58 through which the liquid extrudate is applied to the forming tobacco rod is located in the middle of the forming tobacco rod, as clearly shown in Fig. 2.

The placement of this nozzle 58 in the middle of the forming tobacco rod is clearly a disruption to the formation of the tobacco particles into a rod. The flow of tobacco particles in the chimney 10, as seen in Fig. 1 is in a generally upward direction. The placement of the pipe 51 in the chimney and its location in the accumulating tobacco particle rod, together with the location of the liquid extruding tobacco rod in the

midst of the accumulating tobacco rod is clearly disruptive of the formation of the tobacco rod.

In the subject invention, as seen in the drawings, as discussed in the specification, and as recited in the claims as previously submitted and now even more clearly as amended by the present Amendment, the smoke modifying material that is added to the tobacco rod, as recited in claims 19, 21-26, 29-38 and 40-47 is in the form of a continuous fibriform element. That continuous fibriform element is provided to the rod-making machine from a location remote from the rod-making machine. As may be seen in the drawings of the subject application, and as recited in the specification, the continuous fibriform smoke-modifying element, generally at 13, is wound on a spool 14 which is located remote from the smoking material rod making machine. This continuous fibriform smoke-modifying element is pulled by feed rollers 11 and 12 off the spool 14 and is directed to the interior of the smoking material rod-making machine at a point intermediate the ends of the suction band 3'.

The continuous fibriform smoke-modifying element has a degree of rigidity. That degree of rigidity is sufficient to constrain the smoke-modifying element from being immediately displaced upwardly toward the suction band. In other words, the continuous fibriform smoke-modifying element is sufficiently rigid that when it enters the chimney portion or area of the smoking material rod-making machine, it will not immediately be pulled against the suction belt. Instead, it will follow an inclining path from its point of introduction into the rod-making machine until it contacts the particulate

smoking material that has already been accumulated on the suction band.

The benefit of the method in accordance with the present invention is that the accumulation of the particulate smoking material on the suction band is not disrupted or disturbed by the placement of a nozzle head in the area of particulate accumulation on the suction band. Haws teaches the use of a liquid extrudate. While that liquid is recited as being a viscous liquid, it is still a liquid. If the nozzle head 58 of the Haws device were to be relocated so that it did not extend into the forming rod of particulate material, the liquid extrudated from that nozzle head would disperse in the chimney and would land on the walls of the guide rails 62, on the surfaces of the chimney 10 and at locations in the tobacco rod other than in the rod's center. Such a distribution pattern would be ineffective and wasteful of material.

In contrast, the method of the present invention, as recited in claims 19, 21-26, 29-38 and 40-47 utilizes a continuous fibriform smoke-modifying element that has a degree of rigidity and that is supplied to the rod-making machine from a location remote from the machine. The result is a substantially more efficient utilization of the smoke-modifying element, its positioning in the tobacco rod in a desired location, and a greatly reduced disruption of the flow of particulate smoking material on the suction band.

As discussed with Examiner Halpern during the interview of April 17, 2003, it is believed that the amendments made to the claims by the present Amendment place them in condition for allowance. It is also believed that these amendments do not add new matter and will not require any additional searching by the Examiner.

Referring initially to thrice amended claim 19, the language of claim 20 has been added. This language recites that the material incorporated into the smoking material rod is a continuous fibriform smoke-modifying element. Since this language was in claim 20, its inclusion into claim 19 does not raise new issues and will not require additional searching.

Claim 19 has also been amended to now specifically recite that the continuous fibriform smoke-modifying element is provided at a location remote from the rod-making machine and is supplied to the rod-making machine. Such a location of the element is clearly shown in Figs. 1 and 3 of the drawings. In addition, claims 25 and 38 recited feeding of the element to the machine at a fixed speed, in claim 25, and along a longitudinal first path in claim 38. Clearly the teaching of the application and drawings, and the language of claims which have already been examined support this recitation of the location of the continuous fibriform smoke-modifying element supply at a location remote from the rod-making machine. The specific recitation of this location in thrice amended claim 19 does not add new matter or require any additional searching.

Claim 19 prior to the present amending, recited that the element had a degree of rigidity. The claim has been amended to recite that the degree of rigidity constrains the element from being immediately displaced upwardly toward the suction band. Support for that language can be found in the specification of the application, at page 7 lines 16-20. In addition, claim 40, as previously presented discussed the constraining of the element, having a degree of rigidity, against a suction force exerted by the suction band

and that the element is thus not directed toward the material deposition run of the suction band until a certain distance along the run. This language added to thrice amended claim 19 also is believed not to raise new issues or to require additional searching by the Examiner. The language added with respect to the degree of rigidity quantifies that degree of rigidity in terms of its function. The recitation of the element having a degree of rigidity was present in the claim prior to the current Amendment. Claim 19, as thrice amended is thus believed to be patentable.

Claim 20 has been cancelled. Its language has been added to claim 19.

Claims 21-23 have been carried forward. They depend from believed thrice amended claim 19 and are also believed to be allowable.

Claims 24 and 25 have been amended to remove the pre-formed language, as discussed above, and to conform the recitation of the continuous fibriform smoke-modifying element to claim 19. These claims also depend from claim 19 and are thus believed to also be allowable.

Independent claim 26 has been amended a third time in a manner essentially the same as thrice amended claim 19. It includes a recitation of a guide for the continuous fibriform smoke-modifying element and recites that the element is constrained by the guide and by the degree of rigidity from immediately contacting the particulate material on the suction band. Claim 26, as thrice amended, is believed to be patentable over Haws for the reasons set forth in connection with claim 19. It also is believed not to raise new issues or to require additional searching.

Claims 27 and 28 have been cancelled. The language of claim 27 is now included in claim 26. The language of claim 28 is in conflict with the language of claim 26. The method recited in claim 28 is provided protection by allowed claim 39.

Claims 29-31 are carried forward. They depend from believed allowable claim 26 and are believed to be allowable.

Claim 32 has been amended to bring its language into conformity with claim 26, thrice amended. Claim 32 is believed to allowable.

Claims 33-37 have been carried forward. These claims are all dependent from believed allowable claim 26 and are thus also believed to be allowable.

Claim 38 has been amended a third time, again in a manner that is similar to thrice amended claims 19 and 26. It now recites a continuous fibriform smoke-modifying element located remote from the smoking material rod-making machine and having a defined degree of rigidity. Thrice amended claim 38 is believed to be patentable over Haws for the same reasons advanced in connection with claims 19 and 26.

The allowance of claim 39 is noted and appreciated. This claim has been carried forward.

Claims 40-43 have all been amended in a manner essentially the same as was done with claims 19, 26 and 38. Each of these claims now recites a continuous fibriform smoke-modifying element which is remote from the rod-making machine and which has a defined degree of rigidity. These claims are all believed to be patentable

over the Haws reference cited and relied on by the Examiner for the reasons set forth in connection with claim 19.

Newly presented dependent claims 44-47 have been added to provide the applicant with a scope of protection believed warranted by the invention. These claims depend from believed allowable claims 19 and 26 and are believed also to thus be allowable. Their claimed subject matter is clearly shown in the drawings and is set forth in the specification.

The Examiner's Response to Amendment section of the Final Office Action has been reviewed. The recitation of "pre-formed" has been removed. It is agreed that claim 39 has been allowed. With respect to the various assertions made regarding the Haws reference, it is believed that these have been correct in the remarks set forth in this Amendment.

The various other references of record, but not relied on by the Examiner in the rejection of the claims, have been reviewed. Since they were not applied against the claims, no further discussion thereof is believed to be required.

SUMMARY

The specification of the application has been amended to remove the language objected to. The claims have been amended to remove the objected to language. Claims 19, 24, 25, 26, 32, 38 and 40-43 have been amended. Claims 20, 27 and 28 have been cancelled. Claims 21-23, 29-31, 33-37 and allowed claim 39 have been carried forward. New dependent claims 44-47 have been added. It is believed that all

of the claims now pending in the subject application are patentable over the prior art cited and relied on by the Examiner. It is further believed that this Amendment After Final Rejection places the claims in condition for allowance without raising new issues or requiring the Examiner to conduct additional searching. Allowance of the claims and passage of the application to issue is respectfully requested.

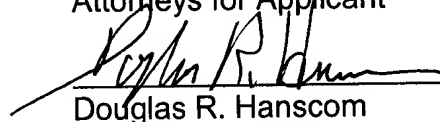
Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Douglas R. Hanscom", is written over a horizontal line.

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MARKED-UP COPY OF TWICE AMENDED PARAGRAPHS

OLIVER - 09/762,532

The fibriform smoke-modifying material suitably takes the form of a single, continuous[, pre-formed] fibriform element. Alternatively, in respect of the second aspect of the present invention the fibriform smoke-modifying material could be fed to and into contact with the particulate smoking material in the form of a sequence of discrete [pre-formed] fibriform elements. In the latter case each element, in the feed path of the elements, may be at each end thereof in contact with the respective ends of the next adjacent elements of the sequence thereof, or may be spaced therefrom.

In Figures 1 and 3 respectively reference numerals 9 and 10 designate generally feed means operable to feed [pre-formed] continuous fibriform element 13 to the making machine, which feed means 9, 10 comprise a pair of opposed feed rollers 11, 12. The feed roller 12 is a spring-loaded, non-driven roller, which roller applies a force to the element 13 without deforming the element 13. The feed roller 11 is driven by a servo motor (not shown). Feed rollers 11 and 12 draw the [pre-formed] continuous fibriform element 13 from a spool 14 upon which spool 14 the continuous element 13 is wound.

MARKED-UP COPY OF AMENDED CLAIMS
19, 24-26, 32, 38, AND 40-43

OLIVER - 09/762,532

19. (Thrice Amended) A method of incorporating a continuous fibriform smoke-modifying element [material] in a smoking material rod, the method, comprising:
- providing a smoking material rod-making machine;
 - including a suction band in said smoking material rod making machine, said suction band having a travel direction, said suction band forming a smoking material deposition run having a start and an end;
 - applying a suction force to said suction band;
 - depositing particulate smoking material on said suction band along said smoking material deposition run between said start and said end of said smoking material deposition run;
 - providing a continuous [pre-formed] fibriform smoke-modifying element [material] having a degree of rigidity at a location remote from said smoking material rod-making machine;
 - providing a longitudinal feed path for said continuous [pre-formed] fibriform smoke-modifying element [material] to follow from said remote location to [in] said smoking material rod-making machine, and in said smoking material rod-making machine said longitudinal feed path being in said travel direction of said smoking material deposition run of said suction band of said smoking material rod-making machine;

feeding said continuous [pre-formed] fibriform smoke-modifying element [material] to said longitudinal feed path;

causing said longitudinal feed path to be followed by said continuous [pre-formed] fibriform smoke-modifying element [material] to start ascending toward said suction band, under the influence of said suction force, at a distance along said smoking material deposition run intermediate said start and end of said smoking material deposition run, said degree of rigidity of said continuous fibriform smoke-modifying element constraining said continuous fibriform smoke-modifying element from being immediately displaced upwardly toward said suction band;

supporting said continuous [pre-formed] fibriform smoke-modifying element [material] and maintaining said continuous [pre-formed] fibriform smoke-modifying element [material] at a position spaced from said suction band by said particulate smoking material deposited on said suction band before, in said travel direction, said ascending of said longitudinal feed path; and

depositing additional particulate smoking material on said suction band along said smoking material deposition run after, in said travel direction, said start of said ascending of said longitudinal feed path.

24. (Thrice Amended) The method according to claim 19 further including causing said feed path of said continuous [pre-formed] fibriform smoke-modifying element [material] to be ascending at an angle and controlling said angle of said ascending of said feed path of said continuous [pre-formed] fibriform smoke-modifying element

[material] so that said angle of said ascending of said feed path is not more than about 5 degrees from horizontal.

25. (Thrice Amended) The method according to claim 19 further including feeding said continuous [pre-formed] fibriform smoke-modifying element [material] to said smoking material rod-making machine at a fixed speed in relation to a speed at which said smoking material rod-making machine is run.

26. (Thrice Amended) A method of incorporating a continuous fibriform smoke-modifying element [material] in a smoking rod material, said method comprising:

providing a smoking material rod-making machine;

including a suction band in said smoking material rod-making machine, said suction band having a travel direction and forming a smoking material deposition run having a start and an end;

applying a suction force to said suction band;

depositing particulate smoking material on said suction band along said smoking material deposition run between said start and said end of said smoking material deposition run;

providing a continuous [pre-formed] fibriform smoke-modifying element [material] having a degree of rigidity at a location remote from said smoking material rod-making machine;

providing a longitudinal feed path for said continuous [pre-formed]

fibriform smoke-modifying element [material] to follow from said remote location to [in] said smoking material rod-making machine and in said smoking material rod-making machine, said longitudinal feed path in said smoking material rod-making machine extending in said travel direction of said smoking material deposition run of said suction band of said smoking material rod-making machine;

providing a guide in said smoking material rod-making machine;

feeding said continuous [pre-formed] fibriform smoke-modifying element from said location remote from said smoking material rod-making machine [material] to said guide;

constraining said continuous [pre-formed] fibriform smoke-modifying element [material] by said guide in said smoking material rod-making machine to follow said longitudinal feed path spaced from said suction band and to be constrained by said guide and by said degree of rigidity against movement in response to said suction force toward said suction band until a distance along said smoking material deposition run intermediate said start and said end of said smoking material deposition run, said continuous [pre-formed] fibriform smoke-modifying element [material] being supported and maintained at a position spaced from said suction band by particulate smoking material deposited on said suction band before, in said travel direction, and by said guide; and

depositing additional particulate smoking material on said suction belt along said smoking material deposition run after, in said travel direction, said guide.

32. (Thrice Amended) The method according to claim 26 further including feeding said continuous [pre-formed] fibriform smoke-modifying element [material] along said longitudinal feed path which extends beneath said smoking material deposition run at a constant vertical distance from said suction band.

38. (Thrice Amended) A method for incorporating a continuous fibriform smoke-modifying element in a smoking material rod, said method comprising:

providing a smoking material rod-making machine having a moving suction band having a start and an end;

exerting a suction force on said moving suction band;

using said suction force exerted on said moving suction band for supporting and transporting particulate smoking material deposited on said moving suction band;

feeding a continuous [pre-formed] fibriform smoke-modifying element having a degree of rigidity to said smoking material rod-making machine along a longitudinal feed path from a location remote from said smoking material rod-making machine, said longitudinal feed path being generally parallel to a direction of travel of said moving suction band in said smoking material rod-making machine;

entering said continuous [pre-formed] fibriform smoke-modifying element into said smoking material-rod making machine along said longitudinal feed path from said remote location at a distance spaced from said moving suction band;

causing said continuous [pre-formed] fibriform smoke-modifying element

to ascend toward said moving suction band due to said suction force at a location intermediate said start and said end of said moving suction band, said degree of rigidity of said continuous fibriform smoke-modifying element constraining said continuous fibriform smoke-modifying element from being immediately displaced upwardly toward said suction band, said continuous [pre-formed] fibriform smoke-modifying element contacting a layer of said particulate smoking material deposited on said moving suction band before said intermediate location; and

depositing additional smoking material on said moving suction band and on said continuous [pre-formed] fibriform smoke-modifying element subsequent to said intermediate location and subsequent to said entering of said continuous [pre-formed] fibriform smoke-modifying element into said smoking material rod machine.

40. (Twice Amended) A method of incorporating a continuous fibriform smoke-modifying element [material] in a smoking rod material, said method comprising:

feeding longitudinally a continuous [pre-formed] fibriform smoke-modifying element [material] having a degree of rigidity to a smoking material rod-making machine along a feed path from a location remote from said smoking material rod-making machine, said feed path₁ in said machine₁ extending in a travel direction of a smoking material deposition run of a suction band of said machine and said feed path₁ in said machine₁ ascending toward said smoking material deposition run;

providing a guide for said continuous [pre-formed] fibriform smoke-modifying element [material] in said rod making machine;

constraining said continuous [pre-formed] fibriform smoke-modifying element [material] by using said guide in said machine so that said continuous [pre-formed] fibriform smoke-modifying element [material] follows said feed path spaced from said run of said suction band and is constrained by said guide and by said degree of rigidity against a suction force exerted by said suction band and directed toward said run until at a distance along said deposition run said continuous [pre-formed] fibriform smoke-modifying element [material] becomes supported and is subsequently maintained at a position spaced from said run by a particulate smoking material deposited on said run; and

depositing additional smoking material on said run subsequent to said distance as which said continuous [pre-formed] fibriform smoke-modifying element [material] is supported by a particulate smoking material deposited on said run.

41. (Twice Amended) A method of incorporating a continuous fibriform smoke-modifying element [material] in smoking rod material, said method comprising; feeding longitudinally a continuous [pre-formed] fibriform smoke-modifying element [material] having a degree of rigidity to a smoking material rod-making machine along a feed path from a location remote from said smoking material rod-making machine, said feed path₁ in said machine₁ extending in a travel direction of a smoking material deposition run of a suction band of said machine;

providing a guide for said continuous [pre-formed] fibriform smoke-modifying element [material] in said rod making machine;

constraining said continuous [pre-formed] fibriform smoke-modifying element [material] by using said guide in said machine so that said continuous [pre-formed] fibriform smoke-modifying element [material] follows said feed path spaced from said run of said suction band and is constrained by said guide and by said guide and by said degree of rigidity against a suction force exerted by said suction band and directed toward said run until at a distance along said deposition run said continuous [pre-formed] fibriform smoke-modifying element [material] becomes supported and is subsequently maintained at a position spaced from said run by a particulate smoking material deposited on said run;

providing a streamlined fairing on said guide; and
depositing additional smoking material on said run.

42. (Twice Amended) A method of incorporating a continuous fibriform smoke-modifying element [material] in smoking rod material, said method comprising:
feeding longitudinally a continuous [pre-formed] fibriform smoke-modifying element [material] having a degree of rigidity to a smoking material rod-making machine along a feed path from a location remote from said smoking material rod-making machine, said feed path₁ in said machine₁ extending in a travel direction of a smoking material deposition run of a suction band of said machine;

providing a guide for said continuous [pre-formed] fibriform smoke-modifying element [material] in said rod making machine;
constraining said continuous [pre-formed] fibriform smoke-modifying

element [material] by using said guide in said machine so that said continuous [pre-formed] fibriform smoke-modifying element [material] follows said feed path spaced from said run of said suction band and is constrained by said guide and by said degree of rigidity against a suction force exerted by said suction band and directed toward said run until at a distance along said deposition run said continuous [pre-formed] fibriform smoke-modifying element [material] becomes supported and is subsequently maintained at a position spaced from said run by a particulate smoking material having a flow path and being deposited on said run;

enlarging said flow path of said particulate smoking material in a vicinity of said guide; and

depositing additional smoking material on said run.

43. (Twice Amended) A method of incorporating a continuous fibriform smoke-modifying element [material] in smoking rod material, said method comprising:
feeding longitudinally a continuous [pre-formed] fibriform smoke-modifying element [material] having a degree of rigidity to a smoking material rod-making machine along a feed path from a location remote from said smoking material rod-making machine, said feed path₁ in said machine₁ extending in a travel direction of a smoking material deposition run of a suction band of said machine, said suction band being provided with a suction force;

providing a guide for said continuous [pre-formed] fibriform smoke-modifying element [material] in said rod making machine;

constraining said continuous [pre-formed] fibriform smoke-modifying element [material] by using said guide in said machine so that said continuous [pre-formed] fibriform smoke-modifying element [material] follows said feed path spaced from said run of said suction band and is constrained by said guide and by said degree of rigidity against said suction force toward said run until at a distance along said deposition run said continuous [pre-formed] fibriform smoke-modifying element [material] becomes supported and is subsequently maintained at a position spaced from said run by a particulate smoking material deposited on said run;

varying said suction force at said portion of said smoking material deposition run adjacent said guide relative to said suction force over a remainder of said smoking material deposition run; and

depositing additional smoking material on said run.